## ILLUSTRATIONS OF THE MALE HOOKS IN NABIS (NABIDÆ, HEMIPTERA).<sup>1</sup>

BY DOROTHY J. HICKMAN, Smith College, Northampton, Mass.

In the genus *Nabis* the males are provided with a pair of copulatory hooks (*hami*), which are visible without dissection and are often useful in the determination of species, as their shape is generally characteristic. This was recognized long ago by Reuter who published in 1873 a paper treating several American species, among others, with figures of moderate accuracy.<sup>2</sup> In some recent work on the genus<sup>3</sup> these genital characters have been employed, but without figures, so that it seems appropriate to offer the accompanying illustrations as a further contribution to the study of this group.

All the American species are figured, with the exception of *crassipes* Reut., *heidemanni* Reut., *spinicrus* Reut., *inscriptus* Kirby, and *kalmii* Reut., of which the last two at least are not definitely understood at present.

There is little real variability in the form of the hooks within the species, even in *ferus*, but the structure is so irregular that the aspect changes somewhat with every shift in lighting and position. Thus no attempt is made to indicate the details of surface sculpture, transparency, etc. In *sordidus*, however, we find a considerable variation in form, of which the extremes are shown in Figs. 3 and 4.

Acknowledgment is made to Mr. H. G. Barber for the loan of several valuable specimens and to Dr. H. M. Parshley for the use of material and for advice during the course of the work.

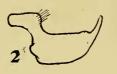
The drawings were made free-hand with the aid of a binocular microscope ( $10 \times$  oc., 25 mm. obj.) and the figures are magnified about 50 diameters.

<sup>1</sup> Contributions from the Department of Zoölogy, Smith College, No. 8. <sup>2</sup> Reuter, "Nabidæ novæ," Ofv. K. Vet.-Ak. Förh., XXIX; No. 6: 79-96, pl. 8, 1872 (1873).

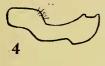
<sup>3</sup> Parshley, "Hem. Peaks Island," Can. Ent., LII: 80-87, 1920.

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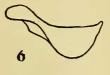














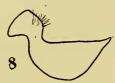










FIG. I. N. subcoleoptratus Kirby.
FIG. 2. N. nigriventris Stål.
FIGS. 3-4. N. sordidus Reuter.
FIG. 5. N. annulatus Reuter.
FIG. 6. N. propinquus Reuter.
FIG. 7. N. limbatus Dahlbom.

- FIG. 8. N. flavomarginatus Scholtz.
- FIG. 9. N. capsiformis Germar.
- FIG. 10. N. ferus Linné.
- FIG. 11. N. roseipennis Reuter.
- FIG. 12. N. rufusculus Reuter.